WHAT DO THESE PLANTS HAVE IN COMMON?

A dandelion growing in your lawn

Photo Richard Old, www.xidservices.com

A tomato plant growing in your driveway

Photo Howard Schwartz, Colorado State University

A native wildflower growing in a vegetable garden

Photo Joy Viola, Northeastern University

WHAT ARE WEEDS?

Weed is a subjective word used to describe any plant growing where it is not wanted, for various reasons.

How might 2 people have different ideas about whether a particular plant is a weed or not?

WHAT'S FUNNY HERE?

NATIVE PLANTS

Native (or **indigenous**) species:

- Occur "naturally", or have not been transferred to their location through direct or indirect human actions.

- These species have adapted to the environmental conditions of their native range, including the influence of other species, through thousands or millions of years.

NON-NATIVE PLANTS

Non-native species (also called **alien, exotic, foreign, introduced, or non-indigenous**):

- Those growing outside of their known native, natural or historic range.

- May be from another continent, another part of the same continent, or even from a different part of the same region.

HOW DO THEY GET HERE?

Accidentally:

- by seeds contaminating animal feed or crop seeds
- by seeds hitchhiking on animals, clothing, shoes, vehicle tires, livestock, pets, boats, or other mobile items.
- **Intentionally:**
- for ornamental, food, or medicinal value
- for livestock forage, windbreaks, or to improve wildlife habitat.

WHAT'S THE SAME?
WHAT'S DIFFERENT?

NATIVE? NON-NATIVE? WEEDS?

HOW DO THEY **DO** THAT?

INVASIVE PLANTS

- Non-native
- Well-adapted to the growing conditions found in their new range.
- Freed from the predators, diseases, or close competitors of their native range
- Spread rapidly and displace other vegetation
- Cause or are likely to cause economic or environmental harm or harm to human health*

* *As defined by The National Invasive Species Information Center*

Traits of Successful Invaders

- They produce many seeds.
- Seeds disperse far and quickly, by being airborne or adhering to fur or clothing.
- Seeds may remain viable for many years.
- Seeds have high germination rates.
- They grow quickly.
- They are able to spread vegetatively.

Traits of Successful Invaders

- They have deep roots (leafy spurge roots can reach 20 feet in length!).
- They are not palatable to livestock and wildlife.
- They are not susceptible to local diseases, parasites, herbivores, etc.
- They are allelopathic- they give off chemicals that inhibit the germination or growth of other plants.

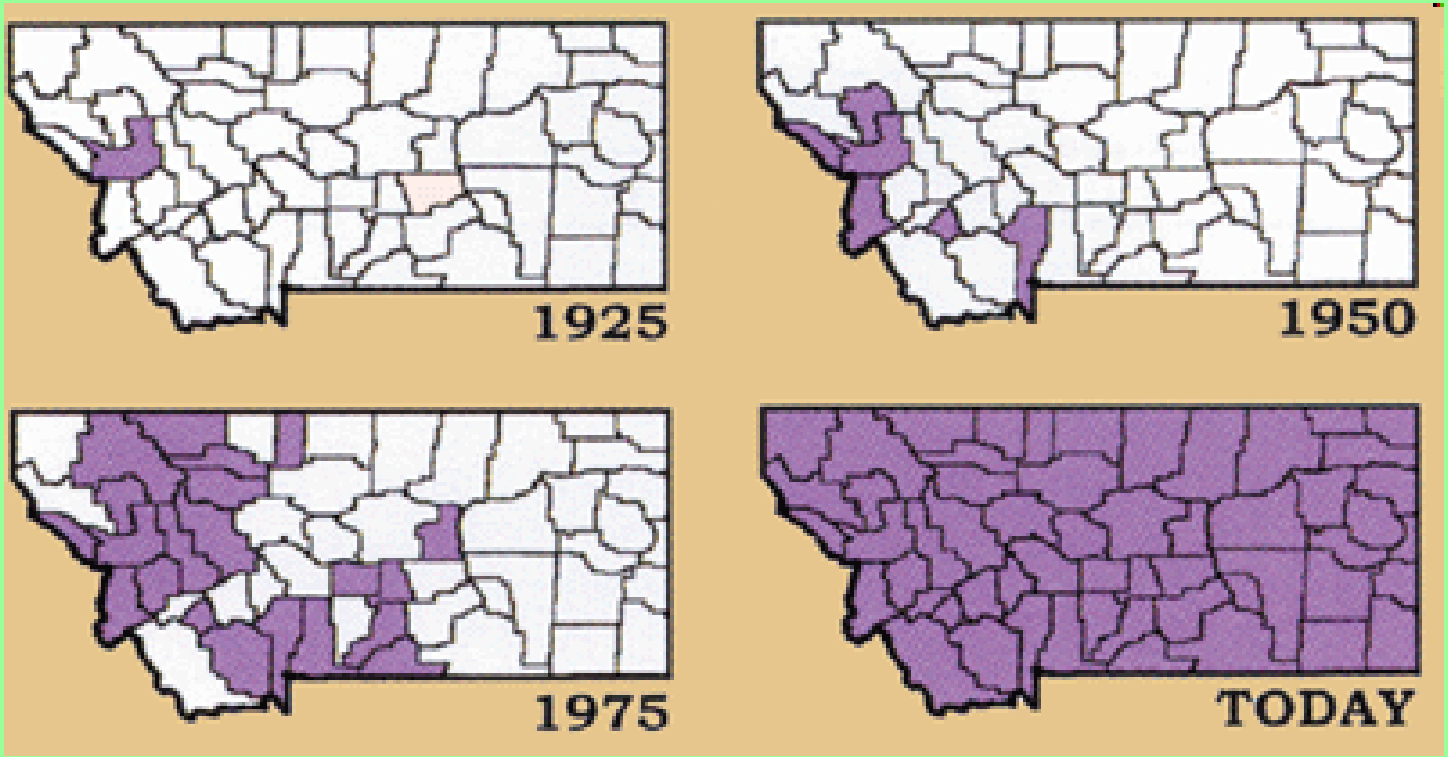
NOXIOUS WEEDS

- Invasive plants that have been given ***special designation through a state or federal law***.

- These laws are designated to protect agricultural production and natural areas by mandating and regulating the control of invasive plants.

- Montana has 34 plants on its Noxious Weed list

Noxious weeds have been spreading rapidly in Montana the past 100 years



Spotted knapweed appeared near Missoula before 1925 and is now in every county in Montana.

Montana County Noxious Weed Control Law states:

- ***"It is unlawful for any person to permit any noxious weed to propagate or produce seeds on their land"***

- How many Noxious Weeds of Montana can you name?

Montana Noxious Weeds:

Canada thistle (*Cirsium arvense*)
Field bindweed (*Convolvulus arvensis*)
Whitetop or Hoary cress (*Cardaria draba*)
Leafy spurge (*Euphorbia esula*)
Russian knapweed (*Centaurea repens*)
Spotted knapweed (*Centaurea maculosa*)
Diffuse knapweed (*Centaurea diffusa*)
Dalmatian toadflax (*Linaria dalmatica*)
St. Johnswort (*Hypericum perforatum*)
Sulfur (Erect) cinquefoil (*Potentilla recta*)
Common tansy (*Tanacetum vulgare*)
Oxeye-daisy (*Chrysanthemum leucanthemum* L.)
Houndstongue (*Cynoglossum officinale* L.)
Yellow toadflax (*Linaria vulgaris*)
Hoary alyssum (*Berteroa incana)*
Purple loosestrife or lythrum (*Lythrum salicaria, L. virgatum*).
Tansy ragwort (*Senecio jacobea* L.)
Meadow hawkweed complex (*Hieracium spp.*)
Orange hawkweed (*Hieracium aurantiacum*)
Tall buttercup (*Ranunculus acris* L.)
Tamarisk [Saltcedar] (*Tamarix* spp.)
Perennial pepperweed (*Lepidium latifolium*)
Rush skeletonweed (*Chondrilla juncea*)
Yellowflag iris (*Iris pseudacorus*)
Blueweed (*Echium vulgare)*
Yellow starthistle (*Centaurea solstitialis*)
Common crupina (*Crupina vulgaris*)
Eurasian watermilfoil (*Myriophyllum spicatum*)
Dyer's woad (*Isatis tinctoria*)
Flowering rush (*Butomus umbellatus)*
Japanese knotweed complex (*Polygonum spp.)*
Scotch broom (*Cytisus scoparius)*

How many can you identify?

WHO CARES?

Invasive plants can:

- Reduce agricultural production, including livestock forage (more expensive food and less of it for all of us!)
- Displace native vegetation, including rare plants
- Degrade or eliminate habitat for wildlife

WHO CARES?

- Increase soil erosion
- Alter the frequency and intensity of fires
- Alter hydrologic regimes and degrade water quality and fish habitat
- Decrease ecosystem stability by lowering biodiversity and interrupting natural processes

HOW DO INVASIVE PLANTS AFFECT YOU?